English translation of the peer reviewed article; ”Forskning i musikterapi – Retspsykiatri”, published in the Danish Journal of Music Therapy [Tidsskrift for Dansk Musikterapi], 2015, 12(1), 24-33. Approved by the editorial board of the Danish Journal of Music Therapy.

Research in Music Therapy – Forensic Psychiatry

***Britta Frederiksen**, Music therapist, MA, PhD-fellow, Doctoral Program in Music therapy, Department of Communication and Psychology, Aalborg University, Contact: bvf@hum.aau.dk*

***Hanne Mette Ochsner Ridder**, PhD, Professor, Music therapy Program and Doctoral Program in Music therapy, Department of Communication and Psychology, Aalborg University, Contact: hanne@hum.aau.dk*

***Liselotte Pedersen**, PhD, Senior Researcher and psychologist, Psychiatric Research Unit and Department of Forensic Psychiatry, Region of Zealand, Contact: lispe@regionsjaelland.dk*

A growing number of studies have found a positive effect of music therapy on mood, thought and insight, social competencies, development of coping strategies, and regulation of arousal and feelings in forensic psychiatric patients. The number of controlled studies, however, is not sufficient to affirm a significant effect of music therapy within this area. For the specific area of patients diagnosed within the schizophrenia spectrum disorder, there is evidence that music therapy can help patients to improve their global state, and especially in improving their negative symptoms. These results are important to mention because a considerable part of forensic psychiatric patients are diagnosed within the schizophrenia disorder spectrum. In forensic psychiatry, the focus is on treating the patient´s psychiatric problems. But in addition there is an increasing focus on treating the patient`s antisocial and criminal behaviour, which also is reflected in the music therapy research literature.

In music therapy, forensic psychiatric patients are offered an opportunity to express, experience, explore, and contain feelings and regulate arousal. The patients can express anger and aggressivity in a situation where it is socially acceptable, and without the risk of harming anyone. Needs for attachment and social relationship, which are unaccustomed and create uncertainty in many forensic psychiatric patients, can in music therapy be met in a non-verbal and safe manner. Music therapy is helpful (conducive) in order to engage and motivate forensic psychiatric patients to cooperate with the treatment.

Introduction

Forensic psychiatry is concerned with both the legal and psychiatric issues. In Denmark, forensic psychiatry is part of general psychiatry. It is a subspecialty and undertake the assessment and treatment of mentally ill offenders. According to Danish law, the forensic psychiatric patient, at the time of the criminal act, was suffering from a mental illness or a condition comparable to mental illness, and therefore is not punishable (Langsted, Garde & Greve, 2011). Danish and foreign studies emphasize music therapy´s ability to support forensic psychiatric patients' motivation to engage in therapy (Gold, Mössler, Grocke et al., 2013), to create structure, regulate arousal and support the patients' ability to express themselves through a non-verbal media (Hakvoort & Bogaerts, 2013; Mejsner, 2009, 2010).

Music therapy research in forensic psychiatry is mainly based on research in countries other than Denmark, where criminal laws are different from Danish laws. Even though forensic psychiatric patients abroad are diagnosed within the same international diagnostic system, the patients may be placed in very different institutions and settings – from psychiatric institutions to correctional institutions or prison (Chen, Hannibal, Xu et al., 2014; Thaut, 1987). In addition, a large number of imprisoned persons worldwide are suffering from serious psychiatric problems and diseases and are not offered any adequate assessment and evaluation (Fazel, 2002).

It is difficult to transfer results from foreign research on music therapy with forensic psychiatric patients to forensic psychiatric patients in a Danish context. This is due to differences in legislation and practices in the examination and treatment of psychiatric offenders. In this article we will review the effect of music therapy within forensic psychiatry, and the theory to explain the effects. We will describe the forensic psychiatric field and forensic psychiatric patients focusing on studies documenting the effect of music therapy with forensic psychiatric patients in Denmark.

Forensic psychiatric patients

According to Danish legislation, persons who at the time of the act were not responsible for their actions due to mental illness or similar conditions, are not punishable. Instead, they can be sentenced to treatment or to be placed in a forensic psychiatric hospital (Kramp, 2005; Langsted et al., 2011). Forensic psychiatry in Denmark is a growing field. The number of forensic psychiatric patients has increased from about 300 patients in 1980 to about 2000 in 2008 (Kramp & Sestoft, 2008). This is mainly due to the fact that an increasing number of persons with a schizophrenic diagnosis have been sentenced. In forensic psychiatry, 75% of the patients are diagnosed within the schizophrenia spectrum disorder (Kramp & Gabrielsen, 2004). Other studies have found a similar increase, and further emphasize that the increase is not caused by any single variable like psychotic symptoms, substance abuse or de-institutionalization (Wallace, Mullen, & Burgess, 2004). In Denmark, some writers point out that the main cause for the increasing number of forensic psychiatric patients can be explained by the reduction in the psychiatric inpatient hospital capacity (Kramp & Gabrielsen, 2003). Epidemiological studies on

cohort populations (see fact box) abroad and in Denmark have found a positive correlation between a major mental illness and criminal violence (Arseneault, Moffitt, Caspi et al., 2000; Brennan, Mednick, & Hodgins, 2000; Räsänen, Tiihonen, Isohanni et al., 1998). It is paramount that this group of patients be offered sufficient treatment in order to prevent criminal behaviour.

Patients with a diagnosis within the schizophrenic spectrum have a substantial disturbance in the ability to connect external sensory experiences and internal bodily and emotional reactions. Therefore, the patients often experience vulnerability and anxiety in new situations and when performing unstructured tasks. In order to protect themselves, the patients react with social isolation and inactivity, which in clinical terms are called negative symptoms. Ultimately, the patient with a schizophrenia spectrum disorder reacts with psychotic symptoms such as hallucinations, delusions and paranoia, which in clinical terms are called positive symptoms (Möller & Hell, 2002; Simonsen & Möhl, 2010). The social consequences of a schizophrenic diagnosis are substantial, severely impacting education and employment opportunities, and in developing and maintaining relationships (Danske regioner, 2011).

Forensic psychiatric patients with a schizophrenic diagnosis are often marginalized and have very complex problems (Danske regioner, 2011). Their problems can be explained as either inner psychiatric/psychological problems or outer behavioural and social problems.

Forensic psychiatric patients with a schizophrenic diagnosis often have a history of anti-social behaviour in childhood (Swanson, Van Dorn, Swartz et al., 2008), and the main part of this group has an early onset of antisocial behaviour before they developed schizophrenia (Pedersen, Rasmussen, Elsass et al., 2010). Furthermore, patients with schizophrenia and ~~an~~ antisocial behaviour have a significantly increased risk of committing violence compared to patients with schizophrenia without antisocial behaviour (Swanson et al., 2008).

In general, forensic psychiatric patients have problems in their affect regulation and they often react with anxiety. They are often tense and have a lack of ability to regulate anger and aggression, leading to missing control of impulses and inappropriate coping strategies (Chen et al., 2014; Jacobsen, Johansen, & DSI, 2011; Smeijsters & Cleven, 2006). Furthermore, 50% of forensic psychiatric patients struggle with alcohol and/or drug abuse (Danske regioner, 2011), which complicates treatment and may lead to an increase in patients' criminal behaviour.

Socially, forensic psychiatric patients show a lack of empathy and difficulty in engaging in interpersonal relationships (Codding, 2002; Smeijsters & Cleven, 2006). Furthermore, they lack structure, suffer from tension, an excessive need for control and a lack of verbal and non-verbal expression (Codding, 2002; Flower, 1993; Smeijsters & Cleven, 2006).
Developing a therapeutic relationship with forensic psychiatric patients is very challenging as the impaired insight into their disease results in low motivation for involvement in the treatment (Hakvoort & Bogaerts, 2013; Jacobsen et al., 2011).

In music therapy it is possible to create a structure where forensic psychiatric patients can express wishes and their need for intimacy and social interaction as well as their need for control and acting. Music therapy can be a starting point for challenging and developing a certain flexibility and the ability to listen to others (Flower, 1993; Smeijsters & Cleven, 2006). An ongoing research project at Aalborg University aims to study how music therapy can support the development of a therapeutic relationship with forensic psychiatric patients with the diagnosis of schizophrenia (Frederiksen, 2013).

Documented effect

Psychiatric issues of forensic psychiatric patients are similar to those of patients assigned to general psychiatry. A Cochrane review (see fact box), analysing the effect of music therapy for patients with a diagnosis within the schizophrenic spectrum show good effect on negative symptoms, general mental state, and social functioning when a sufficient number of music therapy sessions are provided (Mössler, Chen, Heldal et al., 2011; Pedersen, 2012). Medicine is insufficient in relieving negative symptoms like withdrawal from social contact and inactivity, and there is a great need for treatment methods that can help patients with schizophrenia to deal with these symptoms.

In this article we focus only on music therapy with forensic psychiatric patients. We found no studies from a Danish context, and in addition, it is difficult to identify forensic psychiatric patients in the research studies and transfer the results to Danish forensic psychiatry. In some countries, forensic psychiatric patients are placed in jail or correctional institutions and might be named inmates (Codding, 2002; Thaut, 1987), whereas in Denmark, these persons are defined as patients undergoing treatment in psychiatry or forensic psychiatry. Furthermore, studies show a growing number of prison inmates with mental problems and diagnoses such as schizophrenia, anxiety and depression (Andersen, 2004; Fazel, 2002; Priebe, Frottier, Gaddini et al., 2008).

In the USA, Codding (2002) conducted a survey among music therapists practicing in correctional settings housing inmates with severe mental illness. Providing a non-threatening motivating reality focus for appropriate release for energy, tension, stress, or anxiety was described as the treatment objective in music therapy by 90% of the music therapists. The music therapists also state that their treatment plans aim to support the development of self-esteem, self-control and to support the knowledge, development and use of coping skills and stress reduction techniques (Codding, 2002). Two research studies from the Netherlands investigated how music therapy can support forensic psychiatric patients in regulating anger and aggression and in developing coping skills (Hakvoort, Bogaerts, Thaut et al., 2013; Smeijsters & Cleven, 2006).

Music therapy research within forensic psychiatry is growing. An RCT (see fact box) from Norway included 113 inmates from a Norwegian jail, and is one of the first clinically controlled

research studies in this field. In Norwegian jails, 48% of the inmates show severe mental problems and the research design focused on investigating the effect of individual music therapy sessions for these mental problems. It was not possible to draw any conclusions from this study due to a high degree of dropouts due to short sentences (Gold, Assmus, Hjørnevik et al., 2014). The study, however, emphasizes the importance of carrying out controlled music therapy studies, investigating the effect of music therapy among inmates in jails with mental problems and illness.

Xi Jing Chen (2014) included in her PhD thesis a systematic literature review and meta-analysis of studies investigating music therapy with offenders placed in correctional settings. In her study she investigated group music therapy with adult offenders in a Chinese jail, and consequently in her literature review only included studies not only with inmates but also forensic psychiatric patients. She included 5 RCT-studies, and the meta-analysis showed that music therapy supports self-esteem and social competencies and reduces anxiety and depression among offenders, without specifying whether these persons had a psychiatric diagnosis (Chen, 2014).

In 1989, Michael Thaut, professor in music and neuroscience, implemented a controlled effect study in the USA. The study aimed at investigating the influence of music therapy interventions on self-rated changes in relaxation, affect and thought in psychiatric prisoner patients (Thaut, 1989). The study included 50 forensic psychiatric prisoner patients. 70% of the participants had a diagnosis within the schizophrenic spectrum, which is comparable to the forensic psychiatric population in Denmark. The patients participated in three different music therapy modalities during a period of 3 months and where asked to fill out a self-rating scale before and after each music therapy session. The study showed a significant change in self-perceived ratings of relaxation, affect and thoughts, indicating improvements in the patients thought about self and one´s own life, and the patient's reactions in situations with increasing anxiety and tension (Thaut, 1989). The different music therapy modalities did not influence the results (Thaut, 1989). In all the studies mentioned above different music therapy methods and interventions were used – receptive as well as active methods, and psychodynamic as well as cognitive approaches. At the present time, it is not possible to conclude which music therapy methods or approaches are the most used or have the strongest impact.

Generally, in forensic psychiatry there is an increasing tendency to focus on the treatment of criminal and antisocial behaviour of the patients, which also is reflected in music therapy research. An RCT study from the Netherlands aimed to investigate the influence of music therapy on anger management, coping skills and dysfunctional behaviour in forensic psychiatric patients (Hakvoort et al., 2013). The study showed an improvement in anger management skills for all participants regardless of whether they received the usual treatment or music therapy. The music therapy participants, nevertheless, showed greater changes in improving positive coping skills, such as accepting a situation and asking for help, and greater changes in diminishing the

use of negative coping skills such as withdrawal from social activities and denial of problems (Hakvoort et al., 2013).

A controlled study from England aimed to study the changes in 5 women hospitalized at a medium secure forensic psychiatric unit after participating in group music therapy. The study showed that self-harm and aggressive behavior was reduced during the music therapy treatment period compared to the control period. Also the study showed a general improvement in the women´s ability to relate to others (Dickinson, 2006).

The latter two studies show a tendency but do not demonstrate sufficient evidence for music therapy treatment. This is due to the small number of participants, as well as the lack of a control group in the study by Dickinson.

Reasons for the effect of music therapy

The effect of music therapy in the treatment of forensic psychiatric patients can be explained by the direct effect of music on the patient as well as how music is used by the music therapist in the therapy. The music therapist combines professional knowledge about the function of music as well as the patient group in preparing and conducting music therapy, and to support and obtain individual treatment goals for the forensic psychiatric patient.

As for the general population, forensic psychiatric patients use music for different purposes in their everyday life, e.g. for diversion, relaxation, energizing, and stimulating sensory processing and integration. The music therapist uses the patient's musical interests and experiences as a starting point in the therapy, in order to motivate and support the forensic psychiatric patient's involvement and interaction in the therapy (Bruscia, 1998; Dickinson, Odell-Miller, & Adlam, 2012; Roberts, 2001). In music therapy it is possible to support the patient's creative resources and have a less directive interaction, otherwise difficult to foster in forensic psychiatric settings. Hereby the patient's motivation and potential for engaging cooperatively in the treatment plan is strengthened (Dickinson et al., 2012; Roberts, 2001). Firstly, the music therapist can interact with the patient solely on a musical level, and at the same time establish a meaningful and creative interaction that allows for increased as well as decreased levels of arousal, with the patient still feeling comfortable and at ease (Dickinson et al., 2012; Hakvoort et al., 2013). Musical performing and expression are basically the act of timing, attuning and listening to others and the surroundings (Thaut, 2005), and are essential social skills.

At a neurological level, music affects the autonomic nervous system, and plays a primary role in arousal regulation (Blood & Zatorre, 2001). By regulating musical parameters such as tempo and dynamics, music may lead to bodily relaxation, through the effect on bodily functions such as pulse and breathing (Hakvoort & Bogaerts, 2013). Level of arousal is defined here as the

physiological and psychological state of being alert and able to act. Arousal regulation is fundamental in early child development and established through non-verbal and musical interaction with others and the surroundings. In other words, interaction and communication happens through sound and motion, where synchronization and resonance in tempo, timing, timber and dynamic are essential elements. The American psychiatrist and researcher Daniel Stern describes how an infant when crying, increases bodily arousal and how the primary caregiver through calming down, regulates arousal in the infant and creates a positive physiological experience of trust and security (Stern, 2001). Through this external regulation, the caregiver creates the base for early emotional experiences, named vitality affects. The vitality affects are fundamental for the development of self-regulation.

A majority of forensic psychiatric patients have dys-regulated arousal reactions when they experience discomfort and anxiety. Either the patients react very violently and impulsively, or else they seek isolation in order to avoid the feeling of discomfort (Hakvoort et al., 2013; Smeijsters & Cleven, 2006). In music therapy with forensic psychiatric patients, it is possible to work with and express anger and aggression in a socially acceptable way without hurting anyone (Hakvoort et al., 2013; Smeijsters & Cleven, 2006). When the music therapist and patient play together using the instruments, the music therapist actively takes part in the patient's expression. Level of energy in the music either increases when the patient expresses anger and aggression or decreases when the patient expresses relaxation (Smeijsters & Cleven, 2006). Through professional knowledge about musical means and methods, the music therapist creates a structure around the musical dialogue, and in addition affects this dialogue. The patient's way of coping with and regulating impulses and difficult situations can be played out and challenged directly in the musical interaction between the music therapist and the patient. In this way it is possible for forensic psychiatric patients in music therapy to work with e.g. an excessive need for control (Flower, 1993).

Positive and comfortable experiences activate arousal and stimulate the reward system in the brain. Listening to music and performing music together with the music therapist can also affect arousal directly and through that support the experience of positive and comfortable feelings in the forensic psychiatric patient and soften negative thoughts and hostility (Thaut, 1990). This might again affect the patient's motivation for engaging in a therapeutic process, which is a very important starting point for verbal interventions (Thaut, 1990).

In music therapy it is possible to work with sensory and emotional responses, when the patient plays actively on the instruments with the music therapist (Bruscia, 1998; Dickinson et al., 2012; Thaut, 2005). The music therapist observes attentively non-verbal bodily and sensory responses, and then verbalizes how musical experiences are connected to specific events, feelings, or thoughts (Bruscia, 1998; Dickinson et al., 2012; Hakvoort et al., 2013). When forensic psychiatric patients listen to music in music therapy, the music therapist also registers non-verbal

responses and dynamics in the interaction. The patient insinuates problems, wishes, and needs by choice of music, and the music therapist`s interventions helps to clarify this to the patient, but always being aware of the right timing to introduce these interventions.

Through music it is possible to express feelings and needs at a musical level, however, the forensic psychiatric patient is not initially requested to consider whether the music symbolises his own feelings or needs. This is very important in working with forensic psychiatric patients, where the recognition of suffering from a psychiatric disorder can create anxiety and resistance in the patient against the treatment. Music does activate the same areas in the brain as when we sense feelings, which is why the listener experiences feelings in the music (Koelsch, Fritz, Cramon et al., 2006). The small distance between the sensory perception and the experience of feelings, when listening to music, makes it possible for the forensic psychiatric patient to keep a small distance to those feelings the patient experiences as his own. This distance allows the patient to project negative reactions and "dangerous" or inadequate feelings like anger and humiliation into the music (Hakvoort & Bogaerts, 2013).

In summary, music therapy may support forensic psychiatric patient's ability to express, contain, work through and handle difficult feelings like aggression, and meet the need for attachment. Music therapeutic interventions may support communication, interaction and the regulation of arousal.

Fact box

Cohort – A Cohort study is a longitudinal study observing change in a group of persons who are representative of a larger population, which makes it possible to generalize the results of the study.

Cochrane review is a systematic review of effect studies, primarily RCT-studies. The studies are analysed to assess the quality of research and present an overall evaluation of the. Cochrane reviews are published in The Cochrane Library, and within medical research recognised as the highest standard for assessing the effect of a given treatment.

RCT-study (Randomized Control Trial) is considered as the most reliable clinical research design in order to assess the effect of a treatment. The patients are included in the study through predefined objective criteria in order to achieve a homogeneous and comparable group. The included patients are randomly assigned into a treatment group or a control group. The treatment group receives a standardized treatment following a predefined manual, and the same measurements are done on the two groups. A sufficient number of patients are included in order to be able to carry out statistical tests.

Case study can be used in order to assess the effect of a treatment in a patient or a group of patients. A case study can also be used in order to assess the process in a treatment. Case studies take into account that every patient is unique and the treatment interventions cannot be standardized but must reflect the complexity of each patient`s situation and needs. Case studies

are effective in order to describe and clarify how a treatment approach leads to change or development in a patient`s condition or abilities.

References

Andersen, H. S. (2004). Mental health in prison populations. A review - with special emphasis on a study of Danish prisoners on remand. *Acta Psychiatrica Scandinavica, 110* (s.424), 5-5-59. doi:10.1111/j.1600-0447.2004.00436_2.x

Arseneault, L., Moffitt, T. E., Caspi, A., Taylor, P. J., & Silva, P. A. (2000). Mental disorders and violence in a total birth cohort: Results from the Dunedin study. *Archives of General Psychiatry, 57*(10), 979-986. doi:10.1001/archpsyc.57.10.979

Blood, A. J., & Zatorre, R. J. (2001). Intensely pleasurable responses to music correlate with activity in brain regions implicated in reward and emotion. *Proceedings of the National Academy of Sciences of the United States of America, 98*(20), 11818-11823. doi:10.1073/pnas.191355898

Brennan, P. A., Mednick, S. A., & Hodgins, S. (2000). Major mental disorders and criminal violence in a Danish birth cohort. *Archives of General Psychiatry, 57*(5), 494-500.

Bruscia, K. E. (1998). *Defining music therapy.* Barcelona Publishers.

Chen, X. J. (2014). *Music therapy for improving mental health problems of offenders in correctional settings*. (Unpublished PhD Thesis). Doctoral Program in Music therapy, Department of Communication and Psychology, Aalborg University.

Chen, X. J., Hannibal, N., Xu, K., & Gold, C. (2014). Group music therapy for prisoners: Protocol for a randomised controlled trial. *Nordic Journal of Music Therapy, 23*(3), 224-241. doi:10.1080/08098131.2013.854268

Codding, P. A. (2002). A comprehensive survey of music therapists practicing in correctional psychiatry: Demographics, conditions of employment, service provision, assessment, therapeutic objectives, and related values of the therapist. *Music Therapy Perspectives, 20*(2), 56-68.

Danske regioner (2011). Retspsykiati – kvalitet og sikkerhed. http://www.regioner.dk/~/media/Mediebibliotek_2011/PSYKIATRI/Retspsykiatri/Retspsykiatri%20kvalitet%20og%20sikkerhed_2011.ashx Downloaded 19.02.2015

Dickinson, S. C. (2006). Beyond body, beyond words: Cognitive analytic music therapy in forensic psychiatry–new approaches in the treatment of personality disordered offenders. *Music Therapy Today, 7*(4), 839-875.

Dickinson, S. C., Odell-Miller, H., & Adlam, J. (2012). *Forensic music therapy: A treatment for men and women in secure hospital settings*. London: Jessica Kingsley Publishers.

Fazel, S. (2002). Serious mental disorder in 23,000 prisoners: A systematic review of 62 surveys. *Lancet*. London, England. 359(9306), 545-550.

Flower, C. (1993). Control and creativity. Music therapy with adolecents in secure care. I M. Heal, & T. Wigram (Eds.), *Music therapy in health and education* (pp. 40-45). London: Jessica Kingsley Publishers.

Frederiksen, B. (2013). *The development of therapeutic relationship in music therapy with forensic psychiatric inpatients with schizophrenia – a multi strategy case study* (Unpublished Elaborate Proposal). Doctoral Program in Music therapy, Department of Communication and Psychology, Aalborg University. Abstract available at: http://www.mt-phd.aau.dk/organisation/current/britta_frederiksen/

Gold, C., Mossler, K., Grocke, D., Heldal, T. O., Tjemsland, L., Aarre, T., Aaro, L.E., Tittmannsberger, H., Stige, B., & Rolvsjord, R. (2013). Individual music therapy for mental health care clients with low therapy motivation: Multicentre randomised controlled trial. *Psychotherapy and Psychosomatics, 82*(5), 319-331. doi:10.1159/000348452 [doi]

Gold, C., Assmus, J., Hjørnevik, K., Qvale, L. G., Brown, F. K., Hansen, A. L., Waage, l. & Stige, B. (2014). Music therapy for prisoners: Pilot randomised controlled trial and implications for evaluating psychosocial interventions. *International Journal of Offender Therapy and Comparative Criminology, 58*(12), 1520-1520-39. doi:10.1177/0306624X13498693

Hakvoort, L., & Bogaerts, S. (2013). Theoretical foundations and workable assumptions for cognitive behavioral music therapy in forensic psychiatry. *Arts in Psychotherapy, 40*(2), 192-200.

Hakvoort, L., Bogaerts, S., Thaut, M. H., & Spreen, M. (2013). Influence of music therapy on coping skills and anger management in forensic psychiatric patients: An exploratory study. *International Journal of Offender Therapy and Comparative Criminology*. doi:10.1177/0306624X13516787

Jacobsen, C. B., Johansen, K. S., & DSI, D. S. (2011). *Udvalgte udviklingstendenser i dansk retspsykiatri*. København: Dansk Sundhedsinstitut.

Koelsch, S., Fritz, T., Cramon, D. Y., Müller, K., & Friederici, A. D. (2006). Investigating emotion with music: An fMRI study. *Human Brain Mapping, 27*(3), 239-239-250. doi:10.1002/hbm.20180

Kramp, P. (2005). Concepts and procedures in the member states - Denmark. I H. J. Salize & H. Dressing (Eds.), *Placement and treatment of mentally disordered offenders - legislation and practice in the european union* (pp. 152-175). Lengerich: Pabst Science Publishers.

Kramp, P., & Gabrielsen, G. (2003). Kriminalitet begået af psykisk syge 1977-1999: Udvikling, antal og årsager. *Ugeskrift for Læger, 165*(25), 2553-2556.

Kramp, P., & Gabrielsen, G. (2004). Retspsykiatriske patienter i H: S: Diagnoser, misbrug og kriminalitet. *Ugeskrift for Læger, 166*(34), 2890-2894.

Kramp, P., & Sestoft, D. (2008). Psykose og kriminalitet. *Ugeskrift for Læger, 170*(46), 3768-3770.

Langsted, L. B., Garde, P., & Greve, V. (2011). *Criminal law in Denmark.* Alphen aan den Rijn; København: Kluwer Law International; DJØF Publishing.

Mejsner, T. (2009). Musikterapi med svært psykotiske og stærkt udadreagerende patienter. *Dansk Musikterapi, 6*(1), 13-18.

Mejsner, T. (2010). Musikterapi med svært psykotiske og udadreagerende patienter - 2. del. *Dansk Musikterapi, 7*(1), 15-20.

Möller, A., & Hell, D. (2002). Eugen Bleuler and forensic psychiatry. *International Journal of Law and Psychiatry, 25*(4), 351-360. doi:10.1016/S0160-2527(02)00127-9

Mössler, K., Chen, X., Heldal, T. O., & Gold, C. (2011). Music therapy for people with schizophrenia and schizophrenia-like disorders. *Cochrane Database of Systematic Reviews*, (12)

Pedersen, I. N. (2012). Forskning i musikterapi. *Dansk Musikterapi, 9*(1), 49-59.

Pedersen, L., Rasmussen, K., Elsass, P., & Hougaard, H. (2010). The importance of early anti-social behaviour among men with a schizophrenia spectrum disorder in a specialist forensic psychiatry hospital unit in Denmark. *Criminal Behaviour and Mental Health, 20*(4), 295-304. doi:10.1002/cbm.781

Priebe, S., Frottier, P., Gaddini, A., Kilian, R., Lauber, C., Martínez-Leal, R., Munk-Jørgensen, P., Walsh, D., Wiersma, D., & Wright, D. (2008). Mental health care institutions in nine European countries, 2002 to 2006. *Psychiatric Services, 59*(5), 570-570-573. doi:10.1176/appi.ps.59.5.570

Räsänen, P., Tiihonen, J., Isohanni, M., Rantakallio, P., Lehtonen, J., & Moring, J. (1998). Schizophrenia, alcohol abuse, and violent behaviour: A 26-year follow-up study of an unselected birth cohort. *Schizophrenia Bulletin, 24*(3), 437-441.

Roberts, C. (2001). *An exploration of the relationship between music therapy and the forensic environment.* (Unpublished Master of Arts (Music Therapy). Anglia Polytechnic University,

Simonsen, E., & Möhl, B. (2010). *Grundbog i psykiatri.* Kap. 16, s. 287-311. København: Hans Reitzel.

Smeijsters, H., & Cleven, G. (2006). The treatment of aggression using arts therapies in forensic psychiatry: Results of a qualitative inquiry. *Arts in Psychotherapy, 33*(1), 37-58.

Stern, D. (2001). Spædbarnets interpersonelle verden: Et psykoanalytisk og udviklingspsykologisk perspektiv. København: Hans Reitzel.

Swanson, J. W., Van Dorn, R. A., Swartz, M. S., Smith, A., Elbogen, E. B., & Monahan, J. (2008). Alternative pathways to violence in persons with schizophrenia: The role of childhood antisocial behavior problems. *Law and Human Behavior, 32*(3), 228-240. doi:10.1007/s10979-007-9095-7

Thaut, M. H. (1987). A new challenge for music therapy: The correctional setting. *Music Therapy Perspectives, 4*, 44-50.

Thaut, M. H. (1989). The influence of music therapy interventions on self-rated changes in relaxation, affect, and thought in psychiatric prisoner-patients. *Journal of Music Therapy, 26*(3), 155-166.

Thaut, M. H. (1990). Neuropsychological processes in music perception and their relevance in music therapy. I R.F. Unkefer, & M.H. Thaut (Eds.), *Music therapy in the treatment of adults with mental disorders. Theoretical bases and clinical interventions* (pp. 2-32). Gilsum: Barcelona Publishers.

Thaut, M. H. (2005). Rhythm, human temporality, and brain function. I D. Miell, R. MacDonald & D. Hargreaves (Eds.) *Musical Communication* (pp. 171-191). Oxford, UK: Oxford University Press

Wallace, C., Mullen, P. E., & Burgess, P. (2004). Criminal offending in schizophrenia over a 25-year period marked by deinstitutionalization and increasing prevalence of comorbid substance use disorders. *American Journal of Psychiatry, 161*(4), 716-727.